CARBONTECH

PROGRESSIVE COMPOSITE ENGINEERING

COMPANY PROFILE

"THERE IS NOTHING GENERIC ABOUT US"

WHO WE ARE

CARBONTECH: The place chemistry, engineering and global expertise are brought together to drive progressive innovation in advanced composite technologies for the emergency repair of critical assets.

"There is nothing generic about us" -
we don't just sell pipe wraps; we provide accurate engineering backing to deliver tailored solutions.

Sound and responsible engineering is the basis on which we build our company, products and services.

It is the core to our success and it is the foundation on which we have engineered and manufactured our innovative and bespoke systems.

OUR PHILOSOPHY

We adhere to a zero-failure philosophy and ensure that our engineered composite solutions are tested, proven, and validated.

We vow to provide dependable, responsible and accurate information regarding the capabilities of our systems.

SERVICE OFFERING

Our comprehensive global product lines offer suitable solutions on new construction and maintenance projects for tough and demanding environments.

Our reputable products are tested, validated, field proven and backed by a team of global professionals.

2018

SOUTH AFRICA
Johannesburg

CARBONTECH COMPOSITE SYSTEMS

Role: OEM

Distribution Area: Africa

2019

SINGAPORE
Marine Parade

CARBONTECH ASIA

Role: Bulk Distributor

Distribution Area: Asia Pacific

2019

AUSTRALIA
Perth

CARBONTECH AUSTRALIA

Role: Bulk Distributor

Distribution Area: Australia

2019

MIDDLE EAST
UAE

CARBONTECH ME

Role: Bulk Distributor

Distribution Area: Middle East

2019

USA
Tolsa

CARBONTECH AMERICAS

Role: Bulk Distributor

Distribution Area: Americas

2020

NETHERLANDS
Amsterdam

CARBONTECH EUROPE BV

Role: Bulk Distributor

Distribution Area: Europe

2021

SOUTH AFRICA
Johannesburg

CARBONTECH COMPOSITE SYSTEMS

Revowrap 80

Revoshield

TUV product accreditation to ISO TS 24817

2022

SOUTH AFRICA
Johannesburg

CARBONTECH COMPOSITE SYSTEMS

Spitze clamp

ISO9001 TUV accreditation

2023

NIGERIA
Lagos

CARBONTECH COMPOSITE SYSTEMS

Role: Bulk Distributor

Distribution Area: Nigeria

2024

KAZAKHSTAN
Atyrau

Role: Bulk Distributor

Distribution Area: Kazahkstan

INDIA
Mumbai

CARBONTECH INFRA

Role: Bulk Distributor

Distribution Area: India

ABS
(American Bureau of Shipping)
CERTIFICATION

HOW IT WORKS

STEP 1

The client will provide Carbontech engineering with the anomaly description in the form of an engineering assessment form.

STEP 2

Carbontech engineers provide repair recommendations and design-calculations in accordance with ASME PCC2 and/or ISO TS 24817 signed off by a professional engineer.

STEP 3

Materials may be supplied in Kit form for specific projects or repairs.

STEP 4

Installation and quality control are performed by trained distributors.

STEP 5

Quality control documentation is returned to Carbontech engineering for quality assurance and guarantee motivation.

INDUSTRIES

ONSHORE

OFFSHORE

WATER UTILITIES

TANKS

CHEMICAL

TRANSMISSION PIPELINES

PAPER AND PULP

POWER GENERATION

PETROCHEMICAL

Our systems are compliant with industry regulated codes:

ISO TS 24817 & ASME PCC2 & AB-539

Carbontech Composite Systems are the developers and manufacturers of engineered composite materials formulated to restore critical assets back to the original design specifications.

SPITZE HP CLAMP®

EMERGENCY ONLINE LEAK REPAIR SYSTEM

The Spitze HP Clamp® is engineered and manufactured in accordance with ASME VIII Div I for the temporary repair of live high-pressure leaks without having to shut down or isolate the system.

The low-profile standoff height of the clamp is intended for a composite overwrap using any of the Revowrap® systems for long term repairs. The Spitze HP Clamp® is resistant to the harsh chemical environment prevalent in the oil, gas and petrochemical industries

Maximum Design Temperature (**Clamp**)	315°C [599°F]
Maximum Design Pressure (**Clamp**)	Up to 200 Bar
Min/Max Application Temperature	Refer to Spitze bung column
Maximum Application Pressure *	150 Bar
Minimum Allowable Operating Temperature	-46°C [-50.8°F]
Installation Time	10 Minutes
Minimum Pipe Diameter	½ Inch
Maximum Pipe Diameter	56 Inch [larger sizes available on request]
Shelf Life	No limitation if stored correctly
Repair Lifespan	5 Year Design - Extendable
Maximum Defect Diameter	25mm
Sub-sea Application	Available
Man Power Required Per Installation	One
Applications	Elbows, Straight-line, Welds

LEAK-ARRESTING TOOLS

TYPES OF BUNGS

Example of Prone Bung

Example of Crown Bung

Viton Bung
Shore A Hardness
A60 Stainless steel backing plate

EPDM Bung
Shore A Hardness
A50 Stainless steel backing plate

Fluorosilicone
Shore A Hardness
A60 Stainless steel backing plate

Silicone Bung
Shore A Hardness
A50 Stainless steel backing plate

FEATURES & ADVANTAGES

- Fast, non-invasive repair - doesn't require hot work
- High pressure - high temperature
- Repairs done live - no unplanned downtime
- Resistant to harsh chemicals

INDUSTRIES

- Oil and gas facilities
- Petrochemical plants
- Transmission pipelines
- Potable water supplies
- Power generation
- Sub-sea plants

USES

- Pinholes
- Illegal hot taps
- Through wall corrosion
- Weld anomalies
- Through wall defects/cracks

REVOSTRAP

THE 20 SECOND LEAK REPAIR SYSTEM

Carbontech introduces the Revostrap smart system to our arsenal to combat enduring site complications of leaking defects. It is not an industry secret that no composite repairs can be wrapped over active leaks. Revostrap smart systems is the answer! The Revostrap smart system is lightweight, cost effective and very simple to use, it is the strongest temporary leak sealing strapping device on the market.

RS32
REVOSTRAP

Glass Reinforced strapping system
Designed strap around leaking pipes to seal leaks up to 35Bar
Available in 32mm widths

RS-R32: 32mm
REVOSTRAP RATCHET

Designed to tension the Revostrap until the leak has stopped.
Available for the 32mm Revostrap systems

RS-SA30-32
REVOSTRAP 30 BUNG

Designed for low pressure, deformed through wall corrosion or heavily pitted and corroded areas

RS-SA50-19
REVOSTRAP 50 BUNG

Designed for med to high pressure, slightly deformed through wall corrosion or pitted and corroded areas

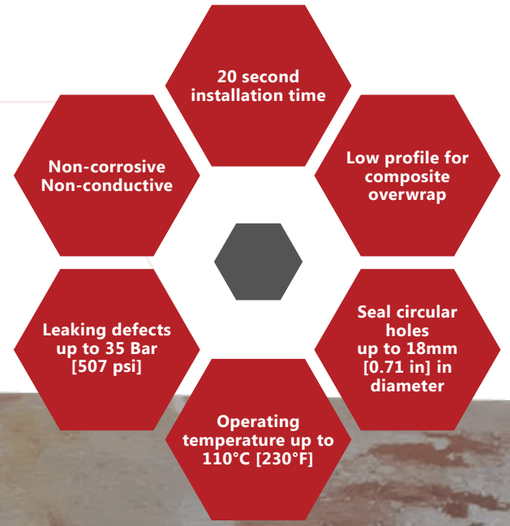
RS-SA80-19
REVOSTRAP 80 BUNG

Designed for high pressure, through wall defects

LEAK REPAIR

FEATURES & ADVANTAGES

- Fast, non-invasive repair - does not require hot work
- Repairs done live - no unplanned downtime
- Low profile for composite overwrap
- 20 Second leak repair system



INDUSTRIES

- Oil and gas facilities
- Petrochemical plants
- Chemical plants
- Transmission pipelines

USES

- Pinholes
- Illegal hot taps
- Welds defects
- Weld anomalies

REVOWRAP® SYSTEMS

YIELDING AMAZING PRESSURE CAPABILITIES

The Revowrap® Composite Systems are engineered to operate in working temperatures from -50°C [-58°F] to 233°C [451.4°F] and bares minimal pressure limitations. Our composite systems can be applied by hand lamination or by infusion methods and may be applied to live piping systems without shutting down for the repair. Revowrap® may be applied to any pipe size, most substrates and almost any piping configuration including tanks, vessels, flanges, and other compromised structural assets.

REVOWRAP80

ASME PCC 2 Compliancy	Fully Compliant
ISO TS 24817 Compliancy	Fully Compliant
Certification	TUV & ABS
Minimum Application Temperature	Please contact Carbontech Composite Systems' Engineering department for project-specific guidance
Maximum Application Temperature	Please contact Carbontech Composite Systems' Engineering department for project-specific guidance
Minimum Allowable Operating Temperature	-50°C [-58°F]
Maximum Allowable Operating Temperature	84°C [183.2°F] for Fibre Glass and 65°C [149°F] for Carbon Fibre
Maximum Allowable Operating Pressure	Design Specific
Shelf Life	2 Year - Extendable
Cure Time	Refer to Carbontech Engineering for specific cure regimes
Minimum Pipe Diameter	No Limitations
Maximum Pipe Diameter	No Limitations
Repair Lifespan	20 Years
Wall Loss Defects (Type A)	Permissible
Through Wall Defects (Type B)	Permissible

WET-LAY SYSTEMS

REVOWRAP110

ASME PCC 2 Compliancy	Fully Compliant
ISO TS 24817 Compliancy	Fully Compliant
Certification	TUV & ABS
Minimum Application Temperature	Please contact Carbontech Composite Systems' Engineering department for project-specific guidance
Maximum Application Temperature	Please contact Carbontech Composite Systems' Engineering department for project-specific guidance
Minimum Allowable Operating Temperature	-50°C [-58°F]
Maximum Allowable Operating Temperature	109°C [228.2°F]
Maximum Allowable Operating Pressure	Design Specific
Shelf Life	2 Year - Extendable
Cure Time	Refer to Carbontech Engineering for specific cure regimes
Minimum Pipe Diameter	No Limitations
Maximum Pipe Diameter	No Limitations
Repair Lifespan	20 Years
Wall Loss Defects (Type A)	Permissible
Through Wall Defects (Type B)	Permissible

REVOWRAP185

ASME PCC 2 Compliancy	Fully Compliant
ISO TS 24817 Compliancy	Fully Compliant
Certification	TUV & ABS
Minimum Application Temperature	Please contact Carbontech Composite Systems' Engineering department for project-specific guidance
Maximum Application Temperature	Please contact Carbontech Composite Systems' Engineering department for project-specific guidance
Minimum Allowable Operating Temperature	-50°C [-58°F]
Maximum Allowable Operating Temperature	211°C [411.8°F]
Maximum Allowable Operating Pressure	Design Specific
Shelf Life	9 Months - Extendable
Cure Time	Refer to Carbontech Engineering for specific cure regimes
Minimum Pipe Diameter	No Limitations
Maximum Pipe Diameter	No Limitations
Repair Lifespan	20 Years
Wall Loss Defects (Type A)	Permissible
Through Wall Defects (Type B)	Permissible

REVOWRAP 225

ASME PCC 2 Compliancy	Fully Compliant
ISO TS 24817 Compliancy	Fully Compliant
AB 539 Compliancy	Fully Compliant
Minimum Application Temperature	Please contact Carbontech Composite Systems' Engineering department for project-specific guidance
Maximum Application Temperature	Please contact Carbontech Composite Systems' Engineering department for project-specific guidance
Minimum Allowable Operating Temperature	-50°C [-58°F]
Maximum Allowable Operating Temperature	233°C [451.4°F]
Maximum Allowable Operating Pressure	Design Specific
Shelf Life	1 Year - Extendable
Cure Time	Refer to Carbontech Engineering for specific cure regimes
Minimum Pipe Diameter	No Limitations
Maximum Pipe Diameter	No Limitations
Repair Lifespan	Up to 20 Years
Wall Loss Defects (Type A)	Permissible
Through Wall Defects (Type B)	Permissible

FEATURES & ADVANTAGES

- Quick non-invasive installation
- Can handle complex piping geometries
- Extraordinary pressure thresholds
- Repairs done live, no unplanned down time
- Extend design life of compromised assets up to 20 years

INDUSTRIES

- Oil and gas facilities
- Petrochemical plants
- Transmission pipelines
- Potable water supplies
- Power generation
- Chemical and sub-sea plants

USES

- Internal corrosion
- External corrosion
- Weld anomalies
- Mechanical damage
- Aging infrastructure

REVOMAT

INTELLIGENT POST-CURE SYSTEM FOR COMPOSITE REPAIRS

The Revomat - is a revolutionary intelligent post cure system developed by our Carbontech engineers to safely and efficiently provide the prescribed cure cycles for high temperature on-site composite repairs. The controller system monitors its own power output relative to pipe temperatures it will remain stable even if pipe temperatures fluctuate.

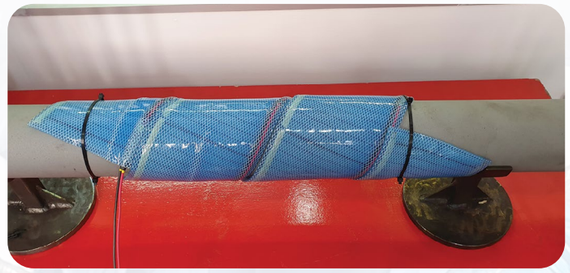
HOW IT WORKS

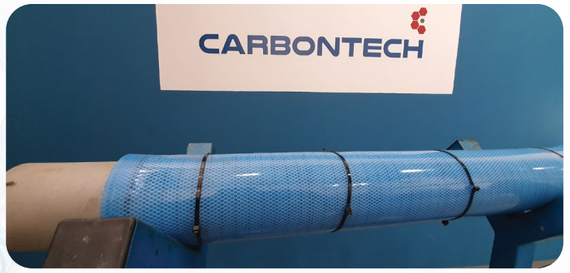
STEP 1 — After the composite wrap has been applied, the Revomat silicone blanket is laid over the repair.

STEP 2 — A soft Insulation layer is used to cover the matt to prevent heat loss.

STEP 3 — The correct cure regime is selected and relevant input data is entered into the controller for quality control measures.

STEP 4 — The cure regime runs automatically and will shut down on completion.





INTRODUCING THE CLEAN-HEAT GIRTH-WELD HEATING SYSTEM.

Our systems are designed to provide safe, residue-free heat to recently field girth-welded pipes. Their primary purpose is to prepare these pipes for the application and curing of corrosion protection coatings in those specific areas. Not only does our system operate faster than current methods, but once set up, it functions autonomously and can maintain temperature at any of the three available settings indefinitely.

These settings are configurable and can be adjusted to suit heating temperatures up to a maximum of 180°C [356°F]. Currently the heating mats are offered for ½" - 56" pipe sizes where custom options are possible.

POST-CURE SOLUTIONS

NO MORE WRAP FAILURES!

Most wrap failures occur due to poor surface preparation, improper installation, or inadequate curing of the repairs. All high-temperature resin systems require very specific curing regimes to complete the cross-link phase of the specific epoxy system. This process unlocks the optimal mechanical properties and chemical resistance performance of the laminate.

FEATURES & ADVANTAGES

- The controller system is intelligent and monitors its own power input relative to the pipe surface temperatures. It ensures stable temperature even if the pipe temperature fluctuates.
- The system records the entire cure cycle and can provide a readout of the temperatures during the cure cycle.
- The user interface is designed in such a way that just a few clicks on the touchscreen will initiate the correct cure cycle for the selected wrap system.
- Lightweight and portable.
- Low power input.

INDUSTRIES

- Oil and gas facilities
- Petrochemical plants
- Transmission pipelines
- Potable water supplies
- Power generation
- Chemical and sub-sea plants

USES

- Post curing of high temperature systems
- Repairs in cold ambient conditions
- Repairs on cold process lines
- Pre-heating for wrap

TRAINING

ASME PCC2, ISO TS 24817, & AB-539 COMPLIANT TRAINING COURSES ON ALL CARBONTECH SYSTEMS

Carbontech provides training and certification compliant with ASME PCC2, ISO TS 24817, and AB-539. Training may be provided at any of our facilities or through accredited distributors. On-site custom training packages are also available.

Carbontech products are engineered solutions that have stringent procedures to ensure successful quality repairs. Training is required to comply with relevant engineering codes and regulations.

HOW IT WORKS

STEP 1

2 Day Course
- One day theory
- One day practical

STEP 2

Written Exam

STEP 3

Practical
Wraps and live pressure tests

FEATURES & ADVANTAGES

- **ISO TS 24817, ASME PCC2, and AB-539 compliant certification**
- **Global Training Facilities**
- **Custom training packages provided**
- **Includes all Carbontech products**

CONTACT US

SOUTH AFRICA, JOHANNESBURG

Michel Pieterse | CEO

+27 (0)10 446 6866

michel.p@revowrap.com
info@revowrap.com

SINGAPORE, SOUTHEAST ASIA

Sherman Ng | Technical Advisor

+65 976 70656 I +65 927 47177

sn@carbontech-asia.com
sales@carbontech-asia.com
noel@carbontech-asia.com

USA, TULSA.OK

JW Lehwald | Managing Director

+1 918 813 7882

sales@carbontech-americas.com

NIGERIA, AFRICA

Paul Agbo | Chief Operating Officer

0703 035 3043

info@revowrap.com

KAZAKHSTAN, TENGIZ

Nathan Ince | Branch Manager

+771230 27498

nathan.e@beruseal.com
info@beruseal.com

NETHERLANDS, AMSTERDAM

Goos Helder | Managing Director

+31 6 2347 6562

ghelder@ctebv.eu

INDIA, NAVI MUMBAI

Rajesh Aerat | Director Business Development

+44 7833881377 | +91 99 87251970

rajesh.a@revowrap.com

UNITED ARAB EMIRATES, DUBAI

Manoli Coumbias | CFO

+27 60 384 5045

manoli.c@revowrap.com
info@revowrap.com

TÜVRheinland CERTIFIED
Management System
ISO 9001:2015
OHSAS 18001:2007
www.tuv.com
ID 9105078318

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www.revowrap.com

info@revowrap.com

+27 (0) 10 446 6866

358 Politician Street, Northlands
Business Park, Hoogland,
Randburg, 2162